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ABSTRACT

A study examined the possible influence that pets may have on children's reading achievement. Subjects, 61 students from three third-grade classes in an urban school, completed a questionnaire about pet ownership. Responses were compiled and score values established to recognize the length of time the child had owned the pet and how much responsibility the child took in caring for the pet. Subjects' total reading scores on the California Achievement Tests were gathered. Results indicated higher reading achievement (but not statistically significant) for children owning pets than those without pets. (One table of data is included; 19 references, the questionnaire, and two appendixes of data are attached.) (RS)

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THE PSYCHOLOGICAL EFFECT OF PET-OWNERSHIP ON READING ACHIEVEMENT

by

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ABSTRACT

The intent of this study was to examine the possible influence that pets may have on children's achievement in reading. It was hypothesized that there would be no significant difference in the reading ability of students who own pets and students who do not own pets. Third graders' responses from a questionaire were compared to their reading scores on a standardized test. Although the hypothesis was supported, results showed the reading achievement of the pet-owners to be slightly higher, indicating that further investigation of this topic might reveal other effects.

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I would like to express my gratitude to those special individuals who helped me to accomplish this project . . .

To my husband, John, for his endless support and encouragement,

To my children, Jonathan and Brittany, for their patience when Mom lost hers,

To all the Third-Graders at Franklin School, for enthusiastically participating in the study,

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And last, but not least, to my cat, Mittens, for being my faithful "study" companion and source of inspiration.

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The importance of pets in our society has received increased attention in recent years. Research has shown the positive psychological and physiological effects of animal companions. Netting, Wilson, and New (1987) state that animals have long been recognized for the benefits they provide their owners, such as, guide dogs for the blind, "hearing-ear" dogs, "feeling-heart" dogs, and "handi-dogs" trained to assist those in wheelchairs. The "pet-on-wheels" program aids the elderly and correctional facilities report positive results of pet therapy with inmates. Heath and McKenry (1989) cited studies by Dismuke, who found horseback riding beneficial to children with language disorders and Smith, who used dolphins to elicit communication from autistic children.

Studies by Jenkins (1986) and Friedman (1983) have shown that blood pressure and heart rates are lowered when people are with animals. Ross (1983) discussed the therapeutic use of animals with emotionally disturbed children. The competence that children gain through caring for pets makes them feel accepted and recognized, which can have a profound influence on their lives.

Pets add constancy to a child's life. They are dependable, warm, and predictably responsive. Caring for pets may enhance a child's sense of responsibility (Heath and McKenry, 1989).

Netting, Wilson, and New (1987) reviewed the historical background of human-animal bonding and how the use of animals has rapidly expanded. Their research shows how pets promote interaction and tactile stimulation, relieve loneliness, and provide emotional support. Levinson (1984) suggested various ways in which companion animals can be used in pet therapy.

Research by Heath and McKenry (1989) has identified five major negative consequences of self-care children - fearfulness, loneliness, social isolation, boredom, and emotional stress. The authors discuss the important role a pet can play in these children's lives.

The studies examined, thus far, have shown the positive effects that pets have on children both physically and emotionally. Considering the present growing interest in pet therapy, Blue (1986) suggested the possibility of additional beneficial aspects of pet-person relationships being found in the near future, stating "...it is important that educators and parents continue to search for means through which productive, growth-promoting responses may be nurtured in the young." She reported that pets may alleviate stresses and anxieties children experience as they approach normal developmental tasks. Responsible caring for a pet can help a child develop feelings of competence and self-confidence.

Burns, Roe, and Ross (1988) discuss positive self-concept as a contributing factor in reading achievement. Studies cited by McGee and Williams (1988) report that depression in children can affect their reading ability and their general ability to learn. It is, therefore, the intention of this study to examine the psychological effect of pet-ownership as playing a positive role in reading achievement.

HYPOTHESIS

A study of three third grade classes in a small urban school district was conducted to determine a correlation between the reading achievement of students who own pets and students who do not own pets. It was hypothesized that there would be no significant difference between the two samples, as evidenced by the total reading score on the California Achievement Tests.

PROCEDURES

Sixty one pupils from three third grade classes in the same school participated in this study. Pupils were asked to complete a questionaire about pet-ownership, see Appendix A. Pupils were first given an explanation of what the survey was about, and a brief discussion about

pets followed. The questions were read orally and the children were instructed to write their responses. Questions were encouraged, and four pupils expressed difficulty in responding to the question regarding the length of time that their pet had lived with them. In responding to the question "What do you do with your pet?" pupils were asked to answer how they actually took care of their pet and not how they thought they were supposed to care for it.

Responses were compiled and score values were established to recognize the length of time the child owned the pet and how much responsibility the child took in caring for the pet. A test of t between the reading of the samples was used to test the hypothesis.

RESULTS

Of the 61 children surveyed, 44 owned pets. The majority of the pets were dogs and cats, followed by small animals, such as, hamsters and guinea pigs, and a minority of birds and fish. It should also be noted that 34 of the children owned two or more pets.

The comparison between pet owners and non-pet owners and their total reading scores on the California Achievement Tests was made with results as noted in Table I. The mean

TABLE 1

The Mean, Standard Deviation, and t of the Reading Achievement of Pet and Non-Pet Samples

	M	SD	t	Sig
Pet owners	56.5	28.4	.58	NS
Non-Pet owners	51.6	33.4		

DF 59

total reading score of the pupils who owned pets was 56.5, and the mean total reading score of the pupils with no pets was 51.6.

A further breakdown was made to determine a relationship between higher scores and pet ownership. Out of the pet-owning group, 24 pupils scored in the top third, above the 70th percentile, 18 pupils scored in the middle third. the 40th to 69th percentile, and 19 pupils scored in the bottom third, the 39th percentile or below. Of the 17 non-pet owners, 7 scored in the top third, 2 in the middle third, and 8 in the bottom third.

The following data was also obtained from the survey: The top third group owned their pets an average of 4.1 years, the middle third group 2.8 years, and the bottom third group 3.6 years. Also measured was the child's interaction with the pet on a point scale from 0 to 7. The top group's interaction score was 3.4, the middle group 3.0, and the bottom group's score was 3.9.

A t of .58 indicated that there was no significant difference between the reading achievement of children owning pets and those without pets.

CONCLUSIONS

Studies have shown that pets can have a positive effect on a person's life, both physically and emotionally. Researchers implied further studies be conducted to determine other areas where pets could enhance the lives of humans. It was the intent of this research to examine an area in which pets could be of help. Could owning a pet influence children's academic success, particularly their reading achievement?

From the results of this research, there appears to be no correlation between pet-ownership and reading achievement. Therefore, the hypothesis that there would be no significant difference in reading achievement between pet owners and non-pet owners, was supported and

this hypothesis accepted.

Since pet-owners show a slightly higher reading achievement, further investigation of this topic, for groups with disabled readers, pupils' self-esteem, etc. might reveal other effects.

THE PSYCHOLOGICAL EFFECT OF PET-OWNERSHIP ON READING ACHIEVEMENT: RELATED LITERATURE

Children categorized as having a secondary reading disability (Fuller) are likely to have emotional problems. Fuller states "The child's emotional state hampers his or her ability to adequately interpret and utilize available cues; that is, under stress, threat, frustration, or general excitement, the child does not perceive accurately what is basic to the reading process." Fuller further states that "Having a difficulty with reading often leads to poor self-confidence and feelings of inadequacy." Therapy is recommended "to handle the basic adjustment problem to which the reading problem is secondary, thus helping to release the child's learning potential." Scheirer and Kraut (1979) analyzed literature regarding self-concept as being a determining factor in educational achievement. Psychologists have long emphasized that a person's beliefs about himself will influence his decisions and actions. The upsurge of the child-centered philosophy movement includes the belief that "a child's feelings about himself are a key factor in his ability to achieve in school." However, the educational intervention programs reviewed by Scheirer and Kraut reveal no changes in achievement associated with changes in self-concept. They found intervention programs produced effects on either self-concept or achievement, but not both. The authors discuss self-concept theories and offer explanations as to

the failure to find the expected links between self-concept and academic achievement. In all the theories reviewed, "self-concept is viewed as a variable necessarily intervening between various sources of self-concept formation and the student's performance on academic measures." An alternative view, which is the position of behaviorist social learning theory, is that "motivation for academic learning comes from the reinforcements of one's social environment for specific learned skills. In this view, self-concept change is likely to be an outcome of increased achievement with accompanying social approval."

Rubin, Dorle, and Sandidge (1977) investigated the relationship between self-esteem, as measured by the Coopersmith Self-Esteem Inventory (SEI), and both educational achievement and school behavior. Five hundred thirty 12 year olds, who were participants in the Educational Follow-Up Study, were sampled. Results showed that IQ was the single best predictor of academic achievement and the SEI was the single best predictor of behavior measures. Self-esteem was found to have a moderate relationship with, but not a strong independent effect on school achievement and behavior. This finding supports the conclusion that much of the relationship between self-esteem and school performance can best be explained as reflecting common underlying factors - "background, ability,

and earlier scholastic success."

Mantzicopoulos (1990) studied the problem of how children cope with failure and the outcomes of their coping efforts. Subjects for the study were 120 fourth, fifth, and sixth grade students from two private schools. Each child was asked to think of an academic situation (a test or a project) in which it was important for him or her to perform well, but in which he or she did not. Following the discussion, each child was administered the Attributions of Achievement Questionaire, the Academic Coping Inventory, and the Self-Perception Profile for Children, and from their responses, four coping groups were formed (positive, defensive, anxiety, and mixed). Results indicated that children who use positive strategies tend to be high achievers, have a higher sense of self-worth, think of themselves as being scholastically competent, and feel positive and successful in their peer relationships.

Skaalvik and Hagtvet (1990) tested four hypotheses correlating academic achievement, self-concept of ability, and general self-esteem. Hypothesis 1: Academic achievement is a stronger predictor of self-concept of ability than vice versa. Hypothesis 2: Self-concept of ability is a stronger predictor of general self-esteem than vice versa. Hypothesis 3: Self-concept of ability is causally

stronger than academic achievement, as a predictor of general self-esteem. Hypothesis 4: Academic achievement is a stronger predictor of self-concept of ability than general self-esteem. Two cohorts of Norwegian school children were studied in grades 3 and 6 and 18 months later. The results supported different causal relationships in the two cohorts, suggesting a recursive model at grades 3 and 4, and a reciprocal model at grades 6 and 7. The findings strengthen the need for longitudinal studies to further examine the relationship between academic achievement and self-concept.

Vincenzi (1987) researched the problem of depression as an affective factor in reading achievement. One hundred thirty-nine black sixth grade students from two schools in different socioeconomic neighborhoods in a large urban school district (School A - low-middle income vs. School B poverty environment) were studied using the Child Depression Inventory and the California Achievement Tests (CAT). Significant differences were found between the two schools on the depression scores and CAT scores; School B showing higher depressive symtoms and lower reading scores supporting the hypothesis that the low levels of achievement may be related to depression, and that there is a higher rate of depression in low income urban areas. Vincenzi concludes that "if a student's affective state can affect his

or her academic achievement, then appropriate interventions need to be developed or employed."

McGee and Williams' (1988) meta-analysis examines the relationship between depression and reading achievement and concludes that "the school performance of the depressed child can ultimately suffer through poor concentration, low motivation, and apathy if the depression is not identified and help offered." However, McGee and Williams cautions researchers to consider the interrelationship of depression with other disorders and believe it necessary to administer measures to identify disorders, such as anxiety, attention deficit, and conduct disorder. They argue that the "association between depression and either reading ability or cognitive impairment is not proven."

Blue (1986) notes that children are becoming deprived of opportunities to observe, play, and work - all of which are essential in developing an individual's abilities and identity. One opportunity which may help children establish a greater sense of security and belief in themselves may be through a relationship with a pet. Today's lifestyles afford many children less contact and closeness with parents. Although they can not replace the love and caring of a parent, pets can provide feelings of closeness and warmth.

Netting, Wilson, and New (1987) review the important role animal companions play in people's lives. Social

workers, along with other professionals, have begun to explore the human-animal bond and the role it can play in intervention strategy. Animals have long been known for their therapeutic use. The first recorded setting was in England in 1792 at the York Retreat where the insane were treated humanely and were allowed to care for small animals. In the United States in the 1940's, veterans at Pawling Air Force Convalescent Hospital in New York, were encouraged to work with animals. Following World War II, Levinson, a psychologist, discovered the possible use of a dog in therapy sessions with a disturbed child. The 1960's found animal-facilitated therapy becoming more popular. By 1970 the American Humane Education Society reported forty-eight percent of all institutions surveyed used animals in some capacity. Many articles have been written during the 1980's about the benefits of the pet-person relationship. Programs have developed that place pets with children, the handicapped, the elderly, and other special population groups.

A social worker, Bikales (1975) describes a case study of an elderly woman and the "significant other" in her life - a dog. Bikales reports "an urgent need for animal shelters to be tied into the social work referral system."

Heath and McKenry (1989) explore the benefits of

pets in the lives of self-care children and conclude that caring for an animal's needs can help develop responsibility for oneself and others. Heath and McKenry cite a study by Bachman in 1975, which questioned children's choice of a helper and why this helper was chosen. The results showed pets ranking high on the list for the following reasons: they don't criticize, they can be trusted, and they show understanding. Although the research is inconclusive, there seems to be a relationship between some self-care children and stress. Some of these children were found to have difficulty coping which interfered with academic performance.

Studies have been conducted which suggest the benefits of pets as anxiety-reducers. Friedmann's, et al (1983) hypothesis that animal companions can lower blood pressure and heart rates was supported by experimental research on 36 children, ages 9-16. The presence of a friendly dog resulted in lower blood pressures both while subjects were resting and while reading. The effect of the presence of the dog was greater when the dog was present initially than when it was introduced in the second half of the experiment. It is suggested that the animal caused the subjects to modify their perceptions of the situation and the experimenter by making both less threatening and more friendly.

The purpose of Jenkins' (1986) research was to determine the physiological effects of petting one's own dog in one's own home, a location which had not been previously measured in other studies. The blood pressures and heart rates of 20 pet owners, ages 9-58, were compared. The hypothesis was partially supported as the blood pressure of pet owners was lower while petting their dogs than while reading aloud. Jenkins concluded that "pets at home have at least as beneficial an effect as they seem to in institutions or other settings."

Redefer and Goodman (1989) report the changes in social behavior of autistic children both during and after their exposure to a planned animal intervention. The population of this study was 12 autistic children, ages 5-10. Each child was seen for a series of systematically planned treatments with a therapist and a dog. In the presence of the dog, the children displayed fewer autistic behaviors and more socially appropriate ones. The results suggest that a dog used in therapy can have a significant impact on the behavior of seriously withdrawn children.

Beck (1986) compared two groups of psychiatric patients (17 patients receiving daily treatment for 11 weeks). Both groups were held in identical rooms except for the presence of caged finches in one of the rooms.

The hypothesis that animals would make the environment less threatening, thereby, encouraging patients to attend sessions more faithfully, participate more, and benefit more from therapy, was supported. The results showed that the bird group had a greater rate of attendance and showed more frequent participation than the nonbird group. Reduction of hostility, as evidenced by a rating scale, suggests that animals are perceived as less hostile, therefore, patients may feel more trusting when around animals.

Kidd and Kidd (1990) investigated the factors which influence feelings and attitudes toward pets. The authors felt this research deserved attention because of the strong attachment between pets and children which begins as early as 18 months of age. Several studies report that most children want pets and some children who cannot have family pets seek out animal companionship. Some children also develop imaginary animal companions as substitutes. Nelson's Parent Questionaire was used to measure information on pet-ownership. Seven hundred children between the ages of 6 months and 18 years were the sampled population. The results supported the first hypothesis that parental attitudes strongly affect children's attitudes toward pets. The second hypothesis that children without pets would score sig-

nificantly lower on the Activities and Interest scales than children with pets, was supported. No significant differences in scores between children in large or small families were found and the hypothesis that children whose mothers were employed full-time would score higher on the Activities and Interest scale than children whose mothers worked part-time, was partially supported.

Research has demonstrated the impact that pets can have on humans, physically, emotionally, and psychologically. Implications from the findings suggest that further research is needed to uncover the potential benefits not yet explored.

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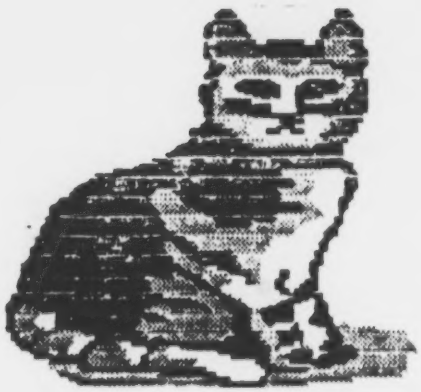
APPENDICES



Your name: _____

1. Do you have any pets? yes or no

2. How many pets do you have? __

3. What kind of pets do you have?

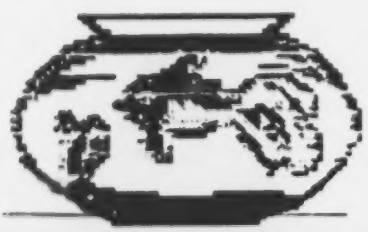
_____

4. How long have you had your pets? _____

5. What do you do with your pets?

(circle your answers)

a. feed
b. walk
c. clean cage or tank
d. groom
e. play with
f. pet
g. nothing



APPENDIX B

Total Reading Score on California Achievement Tests of Pupils Owning Pets

Name	Percentile Rank
Dana	95
Scott	93
Catherine	93
Brianne	92
Amir	91
Florence	90
Monica	88
Kim	81
Kimberly	81
Jamie	80
Lavarr	79
Sandra	77
Nicole	76
Jonathan	75
Raymond	75
Chelsea	74
Kristina	71

Total Reading Score on California Achievement Tests of Pupils Owning Pets

Name	Percentile Rank
Christina	68
Jessica	68
David	65
Rachel	65
Gretchen	64
Dealva	63
Judith	57
Vicki	56
Michael	55
Shatia	55
Jennifer	54
Billy	52
Jamal	51
Robin	51
Andy	46
Heather	44

Total Reading Score on California Achievement Tests of Pupils Owning Pets

Name	Percentile Rank
John	36
Anthony	34
Jilline	32
Melissa	14
Gene	11
Joey	9
Dennis	7
Jennifer	7
Willie	6
Dina	4
Reggie	3

APPENDIX C

Total Reading Score on California Achievement Tests of Pupils Not Owning Pets

Name	Percentile Rank
Melanie	95
Chanel	91
Meghan	91
Chris	88
Tiffany	84
Jason	76
Edward	72
Chris	64
David	64
Marcus	34
Verneatta	32
Mandeep	24
Antoinette	16
Junior	16
Shakerah	13
Barry	11
Alberto	6